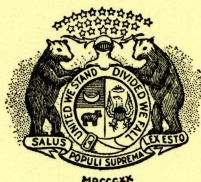


SECOND BIENNIAL REPORT
of the
Division of Resources and
Development

of the
DEPARTMENT OF BUSINESS AND ADMINISTRATION
Transmitted to the Governor
and
The Sixty-sixth General Assembly

Covering the Period
July 1, 1948 to June 30, 1950



RESOURCES AND DEVELOPMENT COMMISSION

GEO. D. CLAYTON, JR., *Chairman*
D. W. SNYDER, JR., *Vice-Chairman*

LOUIS H. BREUER

PRESTON N. COOK

W. F. ENRIGHT

DR. HERMAN M. HAAG

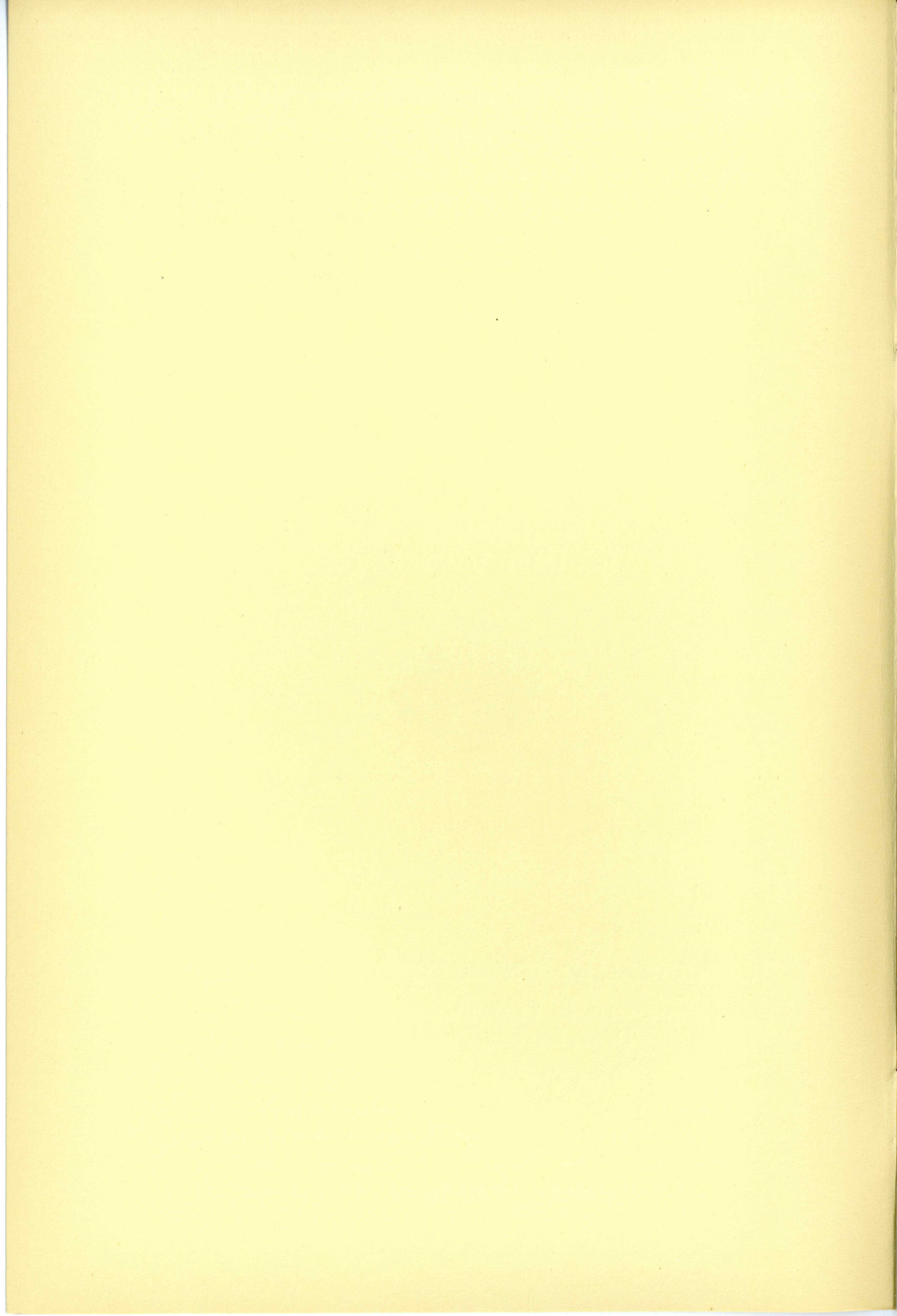
UEL W. LAMKIN

ARTHUR D. LYNN

M. R. ROWLAND

GEORGE C. SMITH

H. H. MOBLEY, *Director*



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RESOURCES AND DEVELOPMENT COMMISSION

Geo. D. Clayton, Jr., Chairman
E. W. Snyder, Jr., Vice-Chairman

Louis H. Bremer	Earl W. Larkin
Preston N. Cook	Arthur D. Lynn
W. F. Enright	M. R. Rowland
Dr. Herman M. Hays	George C. Smith
H. H. Mobley, Director	

LETTER OF TRANSMITTAL

July 1, 1950.

*Mr. Bert Cooper, Director
Department of Business and Administration*

Dear Mr. Cooper:

I herewith transmit a summary of the work of the Division of Resources and Development for the period July 1, 1948, to June 30, 1950.

H. H. MOBLEY,
Director

RESOURCES AND DEVELOPMENT COMMISSION COMMITTEES

Executive Committee

GEO. D. CLAYTON, JR.
Chairman
Hannibal

D. W. SNYDER, JR.
Vice-Chairman
Jefferson City

Finance Committee

W. F. ENRIGHT, *Chairman*
St. Joseph

P. N. COOK
Monett

M. R. ROWLAND
Caruthersville

Aviation Committee

ARTHUR D. LYNN, *Chairman*
Kansas City

GEORGE C. SMITH
St. Louis

UEL W. LAMKIN
Maryville

Industrial Development Committee

GEORGE C. SMITH, *Chairman*
St. Louis

D. W. SNYDER, JR.
Jefferson City

ARTHUR D. LYNN
Kansas City

DR. HERMAN M. HAAG
Columbia

Museum Committee

D. W. SNYDER, JR., *Chairman*
Jefferson City

UEL W. LAMKIN
Maryville

DR. HERMAN M. HAAG
Columbia

Tourist and Recreation Committee

P. N. COOK, *Chairman*
Monett

W. F. ENRIGHT
St. Joseph

LOUIS H. BREUER
Rolla

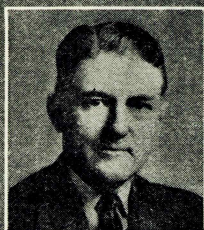
Water Committee

LOUIS H. BREUER, *Chairman*
Rolla

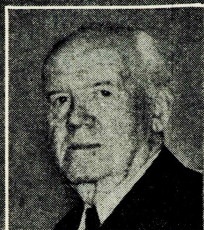
D. W. SNYDER, JR.
Jefferson City

GEO. D. CLAYTON, JR.
Hannibal

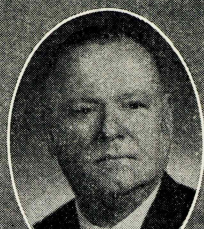
M. R. ROWLAND
Caruthersville



GEO. D. CLAYTON, JR.
CHAIRMAN



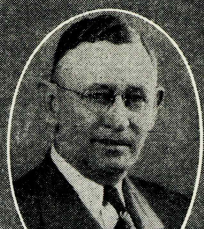
UEL W. LAMKIN
MEMBER



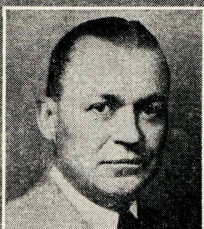
D. W. SNYDER, JR.
VICE-CHAIRMAN



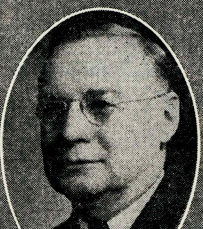
PRESTON N. COOK
MEMBER



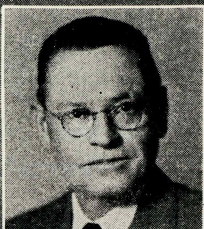
M. R. ROWLAND
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W. F. ENRIGHT
MEMBER



GEORGE C. SMITH
MEMBER



ARTHUR D. LYNN
MEMBER



DR. HERMAN M. HAAG
MEMBER



LOUIS H. BREUER
MEMBER

STATE COMMISSION OF RESOURCES AND DEVELOPMENT



OPERATION OF COMMISSION

During the biennium (July 1, 1948-June 30, 1950) one new commissioner was appointed. On November 22, 1949, Governor Smith appointed Arthur D. Lynn, Insurance Executive, to a full six-year term to replace Herman L. Traber. On the same date, W. F. Enright and George C. Smith were reappointed for new terms of six years each.

Membership on the Commission on June 30, 1950, was as follows: George D. Clayton, Jr., Hannibal, Chairman; D. W. Snyder, Jr., Jefferson City, Vice-Chairman; Louis H. Breuer, Rolla; Preston N. Cook, Monett; W. F. Enright, St. Joseph; Herman M. Haag, Columbia; Uel W. Lamkin, Maryville; Arthur D. Lynn, Kansas City; M. R. Rowland, Caruthersville; George C. Smith, St. Louis, members of the Commission. As during the past the Commission held its monthly meetings in various towns and cities of the state to enable it to better meet local needs and special situations during its deliberations.

The Director of the division, H. H. Mobley, also serves as Secretary to the Commission. Other staff members work in five general sections: Aviation, industrial development, museum, tourist and recreational development, and water development and flood control. Additional personnel are included in the general office which takes care of fiscal matters and routine mailing. Assisting the other sections on specific problems are the research and publicity sections.

Budget limitations required the closing of the eastern representative's office in Washington, D. C., and the discontinuance of the field representatives.

AVIATION SECTION

GENERAL

The Aviation Section of the Division is charged to "encourage the development of the aeronautical resources of the state and aid in an educational program related to aviation." The Division is also responsible for the administration of the Memorial Airfield Act, H. B. No. 192, Sixty-third General Assembly, whereby cities, towns, and counties are eligible for a \$10,000 grant of state funds on a matching basis for the purchase and construction of memorial airports.

The section has maintained a program of service to the aviation public of the state that has included airport development, air marking, aviation education, and distribution of aviation information.

The airport development program has shown that a serious need exists in the way of developing a state-wide plan for airport growth in order that more of the general public of the state can some day enjoy the benefits inherent to air transportation. Many meetings with the CAA have been held and it is apparent that the present program will not develop airports consistent with the need. The section has participated in numerous conferences wherein legislation at the state and federal level has been discussed and has set forth specific recommendations in order that the aviation problems within the state can be more clearly met and solved.

AIRPORT DEVELOPMENT

To date, 35 communities have been approved for state funds under the Memorial Airfield Act, and 28 communities have their airport either constructed or being constructed. The rest of those approved are preparing detailed plans so that construction can begin. In addition to these, several other communities have indicated a desire for similar projects, and, if the necessary matching funds can be acquired, applications will be made to the State. A tabulation of the approved projects showing the local, state and federal funds for each project is included in this report.

With one exception federal funds have been available for each project. Since the federal government, through the Civil Aeronautics Administration, will allow the state funds to be used by the community as matching funds for additional federal

grants, the \$10,000 state grant has resulted in \$20,000 additional funds being available for the project.

Under the terms of the act, the Aviation Section personnel must approve each project before funds are available. This entails final inspection of site and plans, and usually includes aiding the community in finding an available location suitable to its needs.

Working closely with the Civil Aeronautics Administration, the section personnel has been able to thrash out many problems facing the local and state interests in building a better program of development for Missouri.

AIRMARKING

Only 23 new airmarkers were reported completed in Missouri during the biennium. Up to October, 1948, free paint was furnished by the CAA for an airmarker if some organization or individual in a community would furnish the labor. However, a serious problem has always existed in the maintenance of the markers so obtained. Both the roofs on which the markers are placed and paint are subject to rapid deterioration. Of over 200 airmarkers painted in Missouri less than 130 are now in existence and the remainder need repainting.

Four years of experience with volunteer airmarking in Missouri indicates that such a plan will not produce adequate airmarking. Other states have had a like experience and are turning to airmarkers financed with state funds. To establish and maintain a minimum essential system of 300 airmarkers it is estimated that an annual expenditure of \$4,500 would be required. Twice that number, requiring twice the annual expenditure, would be desirable.

AVIATION INFORMATION

To provide current information on the location of airports and their facilities, and how they can be reached, the Division of Resources and Development designed and published in 1949 and again in 1950 revisions of the Missouri Aeronautical Planning Chart and Airport Directory. Nation-wide circulation of these publications upon request and the enthusiastic response from pilots and airport operators of the state is evidence that they have served the intended purpose well.

Aviation development news and articles have been published regularly in the Division's general newsletter since the discontinuance of the special aviation newsletter in August, 1949.

Two state-wide aviation conferences were held, one at Columbia, Missouri, and one at St. Louis, in order to keep all concerned abreast of the latest developments in aviation and to crystallize thinking on state aviation development. Methods of improving aviation services and merchandising were emphasized at these meetings at which representatives of all major aviation interests in the state were present.

A Calendar of Aviation Events was published regularly during the biennium in co-operation with the Missouri Aviation Operators' Association to promote recreational air travel within the state, to coordinate such activities to avoid conflicts of dates, and to encourage use of the existing aviation facilities.

AVIATION EDUCATION

Up to August 1, 1949, the Division continued direct participation in an educational program. The program was designed to encourage and assist the State Colleges and the University to sponsor short courses, institutes, and workshops in aviation, to familiarize the public school teachers and student teachers with the possibilities of correlating aviation information into their teaching.

Despite the fact that the Division discontinued direct participation in the program August 1, 1949, all of the five State Colleges held workshops in aviation education during the 1950 summer sessions. Each of the State Colleges voluntarily assumed the responsibility of carrying on activities in aviation education by hiring an aviation education specialist. This was a desirable result for the work done by the Division in co-operation with the Aviation Development Branch of the Civil Aeronautics Administration during previous years.

In August, 1949, an AIR AGE HANDBOOK for teachers in Missouri public schools was published jointly by the Division of Resources and Development and the State Department of Education and was distributed to the teachers for their use and guidance in aviation education work. The Aviation Section even now receives requests for this publication and has distributed approximately 4,000 copies to date.

CIVIL AIR PATROL

In 1949 the Legislature appropriated through the Division of Resources and Development \$7,000 for the period July 1, 1949-June 30, 1951, for aviation educational activities to be carried on by the Civil Air Patrol. The following report on Civil Air Patrol activities has been prepared by Colonel H. C. Oltman, Commander, Missouri Wing, Civil Air Patrol, Joplin, Missouri.

REPORT OF MISSOURI WING ACTIVITIES

For Period 1 August 49 to 30 June 50

Total membership as of 30 June 1950:

Senior: Male.....	694	
Female.....	116	
Total.....		810
Cadets: Male.....	325	
Female.....	54	
Total.....		379

Cadets recruited during this reporting period: 213

A total of 1,065 hours was flown, 479 hours of which was in Missouri Wing owned aircraft, 421 hours in United States Air Force aircraft on loan to Civil Air Patrol, and 165 hours in private aircraft owned or operated by Civil Air Patrol personnel.

Three hundred sixty-seven cadets were carried as passengers on orientation flights and 827 senior members flew either as pilots on proficiency flights or as pilots and observers on CAP missions.

Some of the missions actually performed by Missouri Wing units during this reporting period include the following:

“Operation Highwater” was credited with minimizing flood damage resulting from ice and snow covering the state during the winter months. CAP personnel flew over 20 hours during this operation.

“Operation Birdseed” prevented serious damage to bird life of the state during winter months. Large ice-bound areas were scattered with food for hungry birds by CAP aircraft.

Many of the Missouri units have had over-night bivouacs utilizing all available flight and ground personnel, aircraft, equipment and communications facilities in mock alerts for air search and rescue, flood patrol, message dropping and other possible

emergencies. A complete critique follows each operation in which mistakes are pointed out and corrected.

Many units arrange air shows to assist in recruiting both senior and cadet personnel.

Kansas City units flew many hours for the Corps of Engineers photographing the trend of the Missouri River. Jefferson City Squadron flew many hours for the Resources and Development making photographs of all airports in the State of Missouri.

During this reporting period, 1,469 members (senior and cadet) received training for a total of 13,961 hours in pre-flight subjects and special training for CAP missions.

War plan missions assigned to the Civil Air Patrol by the United States Air Force include maintaining a pool of carefully selected cadets trained in ground and preflight subjects as a source of personnel procurement for the Air Force; providing anti-submarine patrol; developing an auxiliary radio communications net; participating in search and rescue service as an auxiliary of the Air Rescue Service, MATS; providing courier, mail and light transportation services; providing flights for radar tests, tow target flights and non-combat reconnaissance flights; providing other emergency operations as ordered. Aid to Civil Defense agencies as the Air Arm of the Office of Civilian Defense as outlined in the Hopley Report of 1 October 1948 would include providing anti-sabotage patrol; aerial reconnaissance to assist ground traffic control agencies during periods of emergency; providing patrol of transportation and pipeline facilities, public utilities and natural resources; flying emergency missions for Federal and State agencies and for war industries; assisting in providing emergency communications facilities for devastated areas; assisting in evacuation or supply of civilian population.

All Civil Air Patrol training is for the purpose of being able to fulfill these missions if called upon.

Cadet activities include summer camp, foreign exchange and the annual drill competition. Last year fifty cadets from Missouri attended the annual Cadet Summer Encampment at Forbes Air Force Base, Topeka, Kansas, where they received some eighty hours of academic instruction plus orientation in USAF aircraft and the Link trainer.

Each year some fifty cadets are sent to Canada, England, France, Switzerland, and other countries having a program similar to ours and cadets from these countries are sent to the United

States for a period of approximately one month. Each wing selects the most outstanding cadet with special emphasis on character, leadership, academic standing, knowledge of foreign affairs, physical and mental alertness. Last year Missouri was fortunate in having two cadets participate in this program, one being sent to England and the other to Canada.

One cadet from each wing is also selected to accompany the Wing Commander, Deputy Commander and AF-CAP Liaison Officer to the annual banquet held in Washington, D. C. United States Senators and Representatives from each state are also invited to attend this dinner so they may hear the annual report by the National Commander of Civil Air Patrol on activities throughout the organization. The National organization consists of 52 Wings, one from each state, the National Capitol, Hawaii, Alaska and Puerto Rico.

INDUSTRIAL SECTION

The Industrial Section has continued to encourage the organization of profit-sharing community industrial development corporations. Seventeen organizations have been incorporated in the period covered by this report. Eighty per cent of these corporations have obtained new industry or were completing negotiations with manufacturers as of June 30, 1950.

According to a recent study completed by the Section, thirty-three counties in the state have one or more industrial development corporation organizations with capitalization ranging from \$15,000 to \$140,000, the average being \$51,700. The average annual rental received by these corporations for their industrial plants was \$2,350, a four and one half percent return on the original investment.

From the communities included in the study there were 5,052 employees working as of June 30, 1950, and a total plant investment of \$1,085,400, or an average of \$215 per employee. Considering the average annual industrial worker's earnings to be \$2,252 these communities have created a job opportunity of \$2,252 by investing \$215 in addition to the four and one half per cent return on the investment.

The section has written and personally contacted scores of out-of-state manufacturers who have shown interest in locating plants within the state. Close co-operation is maintained with the Missouri State, the St. Louis, the Kansas City and local chambers of commerce as well as with industrial departments of railroads, utility companies and real estate boards on industrial leads of mutual interest.

The section maintains a current listing of available industrial buildings throughout the state. This listing is mailed to railroads, real estate boards and industrial groups regularly and to others upon request.

The 1950 edition of the Missouri Directory of Manufacturers, A Buyers Guide, will be available for distribution in the fall. The distribution of the 1947 edition evoked widespread interest and requests from many foreign countries. The Directory is distributed to associations of industry, purchasing agents, Ameri-

can and foreign Chambers of Commerce, import and export agencies, foreign consulates and purchasing commissions, and to persons requesting it.

Studies have continued and efforts have been made to bring to Missouri basic industries now lacking in the state, such as cotton and wool processing and finishing, more fertilizer plants, leather tanning, wood processing industries and ceramics manufacture. Efforts are continuing to interest agricultural processing industries in establishing in Missouri. During the period of this report the following types of manufacturing have increased in numbers: Clothing, work clothing, uniforms, undergarments, ladies' suits, ladies' sportswear, men's shirts; candies and cookies; shoes; gloves; plastics; hosiery; furniture (wood and metal); sporting goods; ventilating fans; cloth and paper bags; lighting decorations; safety harness for automobiles and airplanes; plastic and metal signs and fluorescent lighting fixtures; foam glass insulation; glass blocks; fabricated houses, brooms and mops.

Industrial research studies have been continued in order to give industrialists, through advertising and personal contact, accurate current data on all economic and social factors that influence plant location. The availability of such data has been a prime factor in obtaining the location of a number of factories in the state.

The location of new industries and establishments of branch plants is a highly competitive matter. Therefore, the industrial section also analyzes the relative industrial advantages of Missouri as compared to other states.

The period covered from July 1, 1948, to June 30, 1949, shows 114 new industries developed in the state of Missouri employing 3,575 employees with an annual payroll of nine and one half million dollars. On this basis, it is estimated that 228 new industries employing 7,150 employees with a payroll of 19 million dollars located in Missouri from June 30, 1948, to June 30, 1950.

During the 1949 calendar year, 114 new manufacturing plants started operation in Missouri and 138 plants experienced expansion ranging from more than a million dollars to a few thousand dollars. New companies spent \$5,860,000 for land, equipment and buildings, and the expanding companies spent 125 million dollars to increase production.

Missouri's importance as a manufacturing state is more significant if the new industries and those expanding are com-

bined to get a more complete picture of activity for the period. The 252 new and expanded plants had a total investment of \$130,845,000, employed 11,670 more people and increased the manufacturing payroll by nearly 31 million dollars. As compared to the previous year, the number of industries were practically the same. The new investments, however, were nearly 131 million dollars in 1949 as compared with about 95 million dollars in 1948. Additional jobs were provided for 11,670 workers in 1949 while the previous year showed 10,660 employees benefited. The total additional payrolls provided by these new and expanded operations equalled about \$31,000,000 in 1949 as compared to \$25,000,000 the previous year.

MUSEUM SECTION

Modern museum operation is no longer simply a matter of collecting and preserving. If the functional objectives of information dissemination are to be achieved, a museum must expand beyond such activity. An understanding of the work that has been done clarifies today's actions and helps outline future developments.

This is true not only of the Museum exhibits, but also of the operation of the Museum itself. Therefore, the efforts of collecting, investigating, and interpreting through visual means will reach beyond the scope of any report, and perhaps beyond the capacity of the Museum staff of only six persons.

In presenting this information, certain aspects deserve special mention. Whether all of these aspects have resulted in tangible gains or not, the effect of coping with them must be evaluated as part of the complete effort. These efforts can be divided into two main headings: contractual, work undertaken by contractors; co-operative activities undertaken in conjunction with other State agencies and private concerns. These activities are:

Contractual :

1. Because of the deterioration of electrical fittings for the soils map, this installation was redesigned.
2. Special arrangements were made for the restoration of an 1840 stagecoach. Work was complicated by the unique proportions of the coach chassis. Funds would not permit completion of the restoration at this time.

Co-operative activity :

1. Development of a series of eight exhibit units on Missouri highways was achieved through the co-operation of the Highway Department.
2. Funk's "G" Hybrid Seed Industries co-operated with the Museum in the development of an exhibit on hybrid corn.

Listed below are the exhibits added during the biennium. The Box-Multiplex type of case permits the use of actual objects to portray the story:

1. Garment making exhibit.....	Mechanized
2. Hybrid corn development.....	Mechanized
3. Railroad exhibit.....	Mechanized
4. Cutting tools.....	Museum-made case
5. Entomology exhibit.....	Transparencies
6. Aviation exhibit.....	Standard case
7. Pre-history indian pottery.....	Standard case
8. Open-pollinated corn.....	Standard case
9. Corn cob pipes.....	Box multiplex
10. Pearl buttons.....	Box multiplex
11. Missouri costumes for 100 years.....	Art Work
12. First cutting machines.....	Photo multiplex
13. Modern cutting machines.....	Photo multiplex
14. Sewing machines.....	Photo multiplex
15. Highways of Missouri.....	Photo multiplex
16. Trails and Roads of Missouri.....	Photo multiplex
17. Early Highways of Missouri.....	Photo multiplex
18. Early bridge construction.....	Photo multiplex
19. Early highway construction.....	Photo multiplex
20. Modern bridge construction.....	Photo multiplex
21. Right-of-way.....	Photo multiplex
22. Railroad vs. motor car.....	Photo multiplex

Besides these completed projects there are six under way but incomplete. They are:

1. Aviation exhibit, mechanized.....	In preparation
2. Cotton crop exhibit.....	Planned
3. Early land use.....	Ready for preparation
4. Bad land use.....	Planned and contacts made
5. Good land use.....	Planned and contacts made
6. Wood products.....	Planned and contacts made

The Museum is also expanding as a service agency. Of major importance under this heading is the informational service offered to schools and libraries. This service includes the loaning of slides, publications and portable exhibits. Also important is a co-operative research activity and informational service in archaeology, paleontology, geology and history. In effect this second activity is an advanced phase of the first for more specialized groups. Requests from individuals and organized groups are, for the most part, of a research nature. So far, slides and portable exhibit units will not be undertaken until expansion of personnel permits. Among the activities undertaken with specialized researchers are:

Jacob's Cave investigations which resulted in several Museum Reports on a new siltation varve theory, and a request for further co-operation at the cave on paleontology.

Dr. Edward L. Clark called upon the Museum for a survey of an archaeological site at West Lake Quarry near St. Louis. The project proved to be beyond the scope of the Museum, but reports were submitted to all interested agencies.

Miller County Cave excavations were continued this year, and an archaeologically important "Mother and child" burial was excavated in December, 1949. This material is to be developed into an exhibit.

Also included in the Museum effort is the development of the Museum folder. Six inserts on Museum exhibits have been placed in circulation with some 2,414 requests filled, and a second series of six will be available soon.

Visitor attendance for the period of this report represents a new high.

MUSEUM VISITORS FROM JULY 1, 1946, TO JULY 1, 1950

Year	Registered State Visitors	Registered Out-of State Visitors	Total Visitors (estimated)
1945-46 (previous report).....	22,053	220,530
1946-47.....	26,604	6,213	266,040
1947-48.....	32,647	8,630	326,470
1948-49.....	36,732	8,244	367,320*
1949-50.....	31,935	6,737	319,350

*The year of highest attendance also includes the month of highest attendance.

Thus, more than one million persons have availed themselves of the Museum since July, 1945.

Though not a creative activity, the Museum file of all its properties is being re-done. The new system will act as an inventory and a continuing check of all specimens with their locations so that all materials will be readily at hand. This file will not include the Museum library materials since they are not in use at present.

LOANS

The total number of loans to the Museum has been reduced from 39,889 as of July 1, 1948, to the present total of 30,725 as of July 1, 1950. While this still represents a percentage far in excess of proper management, it has been impossible to devote more time to correcting the situation. The loans have a valuation of \$30,197.10.

ACCESSIONS

The loans converted to accession properties total 154, and were augmented by 438 new properties by July 1, 1950. A final balance sheet for this period is represented in the following figures:

Total number of accessions.....	71,567
Total number of loans.....	30,725
Properties on hand in Museum, July 1, 1950.....	102,292

PUBLICITY SECTION

The work of the publicity section is divided into two general phases, advertising and editorial, although some of the promotional work is a combination of the two.

The section handles the advertising program for the division, which is the official state agency advertising the State of Missouri with the use of state funds. The advertising is divided into two types, industrial and recreational. The first tries to interest industry in Missouri as a plant site; the second is a stimulus to tourist traffic into Missouri.

The General Assembly earmarked \$75,000 to be used each year in the biennium. This total was divided so that the recreational advertising received a somewhat larger amount than the industrial advertising.

Media used in industrial advertising included *Fortune*, *Business Week*, *Newsweek*, *Time*, *Modern Industry*, *Forbes Magazine*, *Blue Book of Southern Progress*, *Chicago Tribune*, *Chicago Journal of Commerce* and *New York Times*. The recreational schedule included *Holiday*, *National Geographic*, *American Magazine*, *Grade Teacher*, *The Instructor*, *Scholastic Teacher*, *Highway Traveler*, *Field and Stream*, *Fur-Fish-Game*, *Outdoor Life*, *Hunting and Fishing*, *Sports Afield*, *Travel Items*, *American Artist*, *True*, *Good Housekeeping*, and a selected list of newspapers. Special emphasis was placed on the travel pages of the *Kansas City Star* and the *St. Louis dailies*.

A careful check of incoming mail was kept so that the cost per inquiry of all media was known as well as volume produced by each publication.

Despite rising costs of advertising space and preparation of copy, the advertising produced a larger volume of responses than prior years, because of the elimination of spotty media and emphasis on proven publications. The response to advertising for the biennium, July 1, 1946 to June 30, 1948, totaled 85,351 for industrial and recreational schedules, while the biennium covered by this report brought 93,062 responses. The recreational schedule produced by far the larger bulk of letters and cards.

The publication of new booklets on recreation areas of Missouri was continued with the issuance of the *Pony Express Territory of Missouri*, *Meramec Valley of Missouri*, *Daniel Boone Region of Missouri*, and *Ozark Playgrounds of Missouri*. In

addition, all copy and photographs were in the hands of the printer for the publication, Central Ozarks Region of Missouri, and photography was nearly completed on the Old Trails Area of Missouri.

Missouri Travelogue published in early 1949 and Meet Me in Missouri in 1950 were the general distribution mailing pieces for those years, following the pictorial map-folder in 1947 and Variety Vacations in 1948.

Small pamphlets were published on some of the areas on which booklets had not been published, including Daniel Boone Region, Northern Riverbreaks, Land of the Osage, Old Settlement Area, Delta Area, and Old Trails Area. These were similar to the Pony Express pamphlet, published in the preceding biennium.

Floating and Fishing was redone in 1949 and 1950, bringing data up-to-date and presenting the most recent list of float trip operators.

Publications distributed during the biennium included:

White River Country.....	14,300	Resources Museum.....	10,000
Lake of the Ozarks Country...	16,500	Pictorial Map-folder.....	104,600
Mark Twain Region.....	28,156	Variety Vacations.....	29,750
Big Springs Country.....	18,000	Missouri Travelogue.....	204,000
Pony Express Territory.....	25,400	Meet Me in Missouri.....	125,950
Meramec Valley.....	22,800	Corn.....	800
Daniel Boone Region.....	19,600	Milk.....	2,700
Ozark Playgrounds.....	24,080	Poultry.....	2,100
Airport Directory and Chart...	26,500	Soybeans.....	1,750
Buyer's Guide.....	3,100	Open the Door to Industrial Opportunity.....	5,400
Small area pamphlets.....	26,700	Floating and Fishing.....	23,000
Air Age Handbook.....	3,900	Missouri Shows You ('49 and '50).	80,000
		Total single copies.....	719,086

The division placed exhibits at sports and travel shows in both 1949-1950. To prevent waste, Missouri literature was not passed out at these shows but interested persons signed gummed labels to be placed on envelopes containing the literature.

1948-49		1949-50
5,844	Chicago Outdoor Show	9,350
2,710	St. Louis Sports and Travel Show	4,090
	Detroit News Travel Show	2,409
3,440	Iowa Sports and Vacation Show	2,296
2,450	Chicago Daily News Travel Show	2,774
1,610	Dallas Sports and Vacations Show	3,683
	Tulsa Sports Show	847
1,535	Oklahoma City Sports Show	
17,589	Total Requests for Literature	25,449

Two films have been produced for the division: The Year's at the Spring and Indian Summer, the latter shown for the first time in early 1948. A third film, Missouri and Its Natural Resources, was produced for the U. S. Bureau of Mines film library in co-operation with the Sinclair Refining Co., with the division serving in an advisory capacity in subject matter and assisting in filming. It was received at the end of the biennium. Record of showings for the two years:

The Year's at the Spring
 Showings Attendance
 1,683 167,355

Indian Summer
 Showings Attendance
 1,690 167,355

The section makes available glossy prints to publications desiring to reproduce photographs on Missouri and demand has been constant during the biennium. The photographers divide their time between the outside work and the darkroom.

The section also sends special articles and regular seasonal releases to newspapers and other publications. Scores of newspapers and magazines used Missouri copy and some featured the state in special editions. Probably the outstanding single item was an eight-page spread in Life Magazine on the Missouri Ozarks.

RECREATION SECTION

GENERAL

The Section is composed of a section head, one recreation assistant, and a secretary.

A new advisory board has come into being since the last biennium. The Board of Directors of the Missouri Recreation Association was asked to assume and accepted the duties of a Citizens Recreation Advisory Board. This group has state-wide representation of areas and interests.

The Recreation Section has continued to work during the past two years on an over-all development of Missouri recreation. To attain this goal the work is divided into three divisions—activity-developmental, plans and surveys, and information.

DEVELOPMENTAL WORK

As in the past, each phase of recreation was given attention so that each would prosper to the greatest extent and the over-all recreational development in Missouri would be more complete.

Commercial recreation covers most phases of the field which have to do with vacation and travel, commercial amusements and other paid for recreation.

Community recreation—which might well be termed “public” recreation—includes parks and playgrounds, community events, state parks, roadside development and other phases which require public interest and support. It might be called tax-supported recreation.

Industrial recreation includes all activities for employee groups—whether at the plant or away from work.

The principal problem of the section is to effect a working arrangement of all recreation forces in the state, government and citizens alike.

Citizens Groups—The formation of recreation groups has been continued. Two area associations have been organized, the Pony Express Territory Recreation Association and the Daniel Boone Area Association.

The area groups plan and promote the development of all types of recreation. It is contemplated that there will be area associations in every section of the state.

The Missouri Recreation Association, organized August 12, 1947, with the help of the division, has been active during the past two years, with technical services being supplied by the recreation section. This association has as its aim the support and development of commercial, community and industrial recreation on a state-wide basis.

State Agencies—A number of state agencies interested in some phase of recreation are now active in the Missouri Inter-Agency Committee on Recreation. Meetings are held to discuss various problems and studies arising from time to time. The purpose of the committee is to secure a better co-operative effort on the state level to effect a clearing of information and responsibilities between the various agencies.

Federal Agencies—Several divisions of the federal government have an interest in recreation in Missouri. These include the U. S. Engineers, the National Park Service, the Forest Service, and the Fish and Wildlife Service. At various times during the past two years projects and surveys have resulted in co-operative meetings.

SPECIAL ACTIVITIES

The area and state recreation associations have been given assistance on problems of organization, programs, meetings, and publicity and advertising. Aid has been given to the State Department of Education in its current program of holding courtesy schools, Your Missouri Host, for improvement of operation in resorts, tourist courts, hotels, filling stations and stores, so that the public will be better served. This program was started at the request of the Missouri Recreation Association.

Conferences have been held with personnel directors of industrial firms to aid them in planning employee recreation programs. The section personnel has participated in a number of recreation conferences and institutes including the Missouri Recreation Workshop, Missouri Recreation Association Conference, Park and Recreation Institute, Missouri Arts and Crafts Federation annual meeting, School Camping and Outdoor Education (St. Louis and St. Louis County), Rural Life Conference, Recreation Institute (St. Louis and Columbia), the Kansas City Recreational Festival, and tourist promotion forums with chambers of commerce and area associations.

The recreation section has worked also with the directors of the camping programs of the Girl Scouts, Boy Scouts, F. F. A., 4-H groups, and the American Youth Hostels.

Community recreation programs have received attention within the limits of time and personnel. Twenty-seven communities have been given advice and assistance on parks and recreation. Three counties also received assistance in planning.

PLANS AND SURVEYS

In the field of plans and surveys particular attention has been given to the recreation projects of the U. S. Engineers in connection with the flood control structures planned for Missouri. The studies included the following reservoirs: Meramec Valley, Clearwater Lake, Lake Wappapello, Bull Shoals Dam and the proposed dam on the Salt River.

In co-operation with the St. Louis Federal Reserve Bank estimates on the travel business in the state were secured and the report appeared in their monthly magazine.

A survey was made of communities in the state to determine the number and types of community recreation programs.

At the request of the recreation advisory committee to the St. Louis Board of Freeholders, assistance was given in the preparation of the recreation section of the proposed St. Louis City Charter.

Continued attention has been given to the advancement of recreation courses at the university and colleges of the state.

An important development for the travel segment of recreation has been the proposed Mississippi River Parkway. This section has compiled and designated all points of interest within the affected counties for use by federal agencies in the final selection of the route.

The section, with the co-operation of the State Inter-Agency committee on Recreation, worked on the state policy on recreation for the President's National Water Policies Commission. It also helped prepare the recreational data used in the combined economic study—Local Effects of the Wappapello Reservoir, published by the division.

RESEARCH SECTION

GENERAL

In 1946, the Research Section was established to serve the other sections of the division. Since then it has aided them in collecting data, preparation of reports, and as a source of information. The estimated percentage of time devoted by Research to the other sections during 1949 was as follows: Aviation, 3%; general and director, 10%; industrial, 24%; museum, 2%; publicity, 11%; recreation, 4%; research, 26%; and water, 20%.

MAJOR RESEARCH PROJECTS

During this biennium there have been three major research projects undertaken in addition to the regular studies made and reports prepared.

Wappapello Reservoir Report

Research worked with the water section for several months compiling data for the report, "Local Effects of the Wappapello Reservoir, Wayne County, Missouri, with suggestions for Lessening Undesirable Effects of Reservoirs."

Industrial Survey of Northwest Missouri

The Industrial Survey of Northwest Missouri, completed in February, 1950, took several months to prepare. The survey covered agricultural, mineral and forest resources, labor, manufacturing, power, water, transportation, income, population, retail, service and wholesale trade, climate, living conditions and recreational facilities, and a directory of manufacturing industries in 23 counties and information on the light, power and gas companies serving the area. The report served as a source of statistical information of industrial development factors and offered suggestions in local co-operation and planning.

Missouri Directory of Manufacturers—1950 Edition

Nine months were spent collecting information on manufacturing industries in Missouri for inclusion in this directory to be distributed in December, 1950. Approximately 7,300 firms and

10,380 products are listed. This directory will consist of a classified product listing, an alphabetical company listing, and an alphabetical product listing. Names, addresses and products made by each manufacturing company in Missouri will be found in this publication.

SPECIAL REPORTS PREPARED

During the biennium the Research Section has prepared many special reports and studies. The more important ones are outlined below by subject matter.

Agriculture

Missouri Crop Production—1947 and 1948.*

Missouri Crop Production—1948 and 1949.*

Missouri Fryer Production—1948.*

Aviation

Air Force Academy at Sedalia, Missouri—"Population Centers, Transportation Facilities and Agricultural Characteristics."

Economics

Economic Areas of Missouri (Preliminary Report).

Missouri's Economic Indicators.*

Industrial Development

Business and Industry in Missouri, in "Missouri Shows You, a Guide to the State."

Economic and Industrial Information Pertaining to the Location of a Finishing Plant in Missouri.

Economic and Industrial Information for National Engineering Firm Making Survey of 37 states for possible location of Synthetic Fuel Plants Using Coal or Shale.

Industrial Development Corporations in Missouri, in "ASPDA News Letter, May, 1949."

Industrial Development and Expansion in Missouri—1948.

Industrial Development and Expansion in Missouri During 1949, in "St. Louis Chamber, March 15, 1950."

Missouri's Industrial Opportunities (Preliminary outline of new industrial booklet).

*Included in Division's Monthly Newsletter.

Labor

Manufacturing Companies in Missouri Employing 50 or More People.

Manufacturing

Apparel Industry in Missouri (Data and description for Museum display).

Fertilizer Industry in Missouri (For chemical company).

Maps of Missouri: (4), Showing Distribution by Counties of Total Non-agricultural and Manufacturing Employment and Establishments.*

Comparative 1947 and 1939 Ranking in Manufacturing Activity for Missouri and Other Mid-Western States in the United States.*

Per cent Increase in Manufacturing Activity, 1939 to 1947, Showing Relative Gains Made by Missouri and Other Mid-Western States as Compared to the United States.

1947 Census of Manufacturers Data.*

Marketing

Marketing Study for Area Within 500 Miles of Center of Missouri. Revised to include Later Data.¹

Marketing Study on 20 Mid-Western States Showing Economic and Industrial Importance of this Section of the United States to the Country as a Whole.¹*

Postal Receipts, by Major Cities and County in Missouri—1946, 1947, and 1948.

State Income Payments for Missouri in 1948.*

Mineral Resources

Co-operated with the Division of Geological Survey and Water Resources in suggesting type of data presented in their publication, "The Mineral Industry of Missouri in 1946 and 1947 with Total Production Summarized."

Recreation

Estimated by means of sales tax receipts and census data that the tourist business brought \$198,600,000 to Missouri in 1948 and \$204,000,000 in 1949.

¹Used in National Industrial Advertising Campaign.

*Included in Division's Monthly Newsletter.

Research

Planned a series of work sheets for recording information on Missouri. Forms were prepared for tabulating monthly and yearly data on the state and its cities and counties. Statistical work sheets were also devised for making percentage and ranking comparisons of Missouri with other states, geographical regions, and the United States.

Brief report prepared on the various Missouri state departments and agencies with respect to the type of information they publish.

Statistical table showing the rank of Missouri's cities over 1,000 population by area.

Statistical information, maps, and photographs given to University of Missouri for its forthcoming publication on "Missouri's Resources."

Statistical information for publication furnished to the Statesman's Year Book, (London, England), World Scope Encyclopedia, Encyclopedia Americana, Automobile Manufacturers Association, and others.

"Facts About Missouri," collected from various sources for inclusion in this division's monthly newsletter.

WATER SECTION

Citizens Water Advisory Board

H. C. Bolon, U. S. Dept. of the Interior, Rolla
I. T. Bode, State Conservation Commission, Jefferson City
R. E. Duffy, Public Service Commission, Jefferson City
W. W. Horner, Horner & Shifrin Consulting Engrs., St. Louis
W. Scott Johnson, State Board of Health, Jefferson City
(Deceased)
Prof. H. H. Krusekopf, University of Missouri, Columbia
S. P. Reynolds, St. Francois Levee District of Missouri,
Caruthersville
Prof. H. W. Wood, Jr., University of Missouri, Columbia
Verne Alexander, U. S. Weather Bureau, Kansas City
Edward L. Clark, State Geologist, Rolla
Lue C. Lozier, State Highway Department, Jefferson City
Reed McKinley, Director, Public Works, Kansas City
Earl R. Schultz, Little River Drainage District, Cape Girardeau

Because of the varied interests in water resources development and the tremendous amount of data and information necessary for the proper planning of such development, it has been the policy of the Commission to work in close co-operation with other agencies concerned with the subject. This procedure has resulted in a unified approach to the many water problems and has given assurance that all interests will be given consideration. It has also tended to eliminate duplication of effort by various agencies. Although a great deal has been accomplished toward a unified approach to the water problems of the State, much remains to be done.

PROVISION IN HOUSE BILL

Provision for the appointment of a Commission of Resources and Development is contained in House Bill No. 502, 62nd General Assembly. Section 7 of this bill reads in part as follows:

It shall be the duty of the Commission to:

- (a) Investigate, assemble, develop and study, or cause to have investigated, assembled, developed and studied, all pertinent information available regarding power and water resources;

CONGRESSIONAL POLICY

Public Law 534—78th Congress, and Public Law 14—79th Congress, known as the 1944 Flood Control Act and the 1945 Rivers and Harbors Bill, respectively, contain provisions relative to Congressional policy which recognizes the interests and rights of the states in determining the development of watersheds within their borders. The law requires that prior to the time plans for flood control or other river development projects are submitted to Congress, they shall be submitted to the state for review and comment. Under the provisions of Senate Committee Substitute for House Bill No. 161, 63rd General Assembly, and a directive by the Governor dated September 5, 1945, the Commission of Resources and Development is designated as the official state agency to negotiate and co-operate under the federal law referred to above, except as such matters may relate to forestry and wildlife.

It is apparent that under existing law the Commission has very pronounced duties and responsibilities with respect to water resources development.

CO-OPERATIVE STUDIES

The co-operative study on the Grand River has been continued through the biennium. No definite plan for the land and water resources development has yet been decided upon, but it is hoped that a suitable project can be worked out in the near future. The commission has a major responsibility in working with the Federal government on the engineering phases of the investigation. The organization co-operated with other state agencies in an economic study of the local impact of reservoirs in the Grand Basin. Embracing such items as land class and use in reservoir areas and on land lying below the reservoirs; production on these areas and an evaluation to determine what effect such a program might have on agricultural production; and information on county revenues and the effect on them due to a reservoir program removing land from taxation.

A co-operative study was completed and a report released entitled, "Local Effects of the Wappapello Reservoir, Wayne County, Missouri, with Suggestions for Lessening Undesirable Effects of Reservoirs." Information was gathered for the report jointly by the College of Agriculture and the Division and the various sections co-ordinated by a member of the Bureau of

Agricultural Economics, U. S. D. A. The Division published and distributed the report which is in second printing, due to great demand.

In January, 1949, the President appointed a National Water Policy Commission to evaluate present Federal policies and to determine what revisions should be made to insure a sound utilization of our water resources. Each state was requested by the President's commission to submit comments. In compliance with this request this section co-operated with other state agencies in preparing a report and recommendations setting forth the desires and ideas of the State which we considered to be essential to a sound national policy for the administration of our water resources.

A new study has been started in co-operation with the United States Department of Agriculture, Bureau of Agricultural Economics, and the College of Agriculture, University of Missouri, entitled, "Study of the Effects of the Flood Control and Land Reclamation Programs in the St. Francois Basin in South-eastern Missouri."

The commission continued to fulfill its statutory obligations in making reviews and recommendations on proposed flood control and other water development measures proposed by the Federal government. Reports were made on flood protection projects at Canton, Cape Girardeau, and Ste. Genevieve and St. Marys, Missouri. A small boat harbor project for Elsberry was reported on by the commission. The Meramec River Basin Co-operative Study was completed and the report made available to the public. The Corps of Engineers has been studying flood protection plans for Fishing River near Excelsior Springs and Wears Creek in Jefferson City. The division has participated in these studies and reviewed some of the tentative proposals.

Technical information and advice on flood control and water resources development matters have been furnished to other state agencies and to the Governor throughout the biennium.

The section continued to advise and represent the Governor on the Missouri Basin Inter-Agency Committee. It is the function of the committee to co-ordinate the activities of the various agencies involved in the plan proposed for the development of the basin's water resources. This plan, commonly referred to as the Pick-Sloan Plan, envisions the development of the water resources of the basin for flood control, irrigation, navigation, hydroelectric power and related uses.

The United States Department of Agriculture has prepared a plan for land treatment and conservation practices in the Missouri Basin to supplement the Pick-Sloan Plan which was introduced by the Departments of Interior and Army. Under existing Federal law the Department of Agriculture is charged with the responsibility of making surveys for run-off, waterflow retardation and soil erosion of the basins. The Water Section in cooperation with the University of Missouri College of Agriculture reviewed and commented on the plan before it was transmitted to Congress by the Secretary of Agriculture. The plan provides for treatment on upland areas and for flood protection on small streams where agricultural lands are subject to damage. After the project plan was submitted to Congress, the Missouri Basin Inter-Agency Committee endorsed the plan of improvement which is known as the Agricultural Plan.

